

Form 1449 (Modified)

Information Disclosure  
Statement By Applicant

(Use Several Sheets if Necessary)

Atty Docket No.:  
VTI002DApplication No.:  
09/439,766

Applicant:

Kramer

Filing Date:

11-15-99

Group:

3652

## Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
WLM	A	Bergamasco et al. "Advanced Interfaces For Teleoperated Biomedical Robots" IEEE Engineering in Medicine and Biology Society, 11 <sup>th</sup> Annual International Conference, pages 0912-0913, 1989.
WLM	B	Foley, "Interfaces for Advanced Computing" Scientific American, 257, No. 4, New York, New York, pages 82-86 and 88-90, Oct. 1987.

Examiner:

Underwood

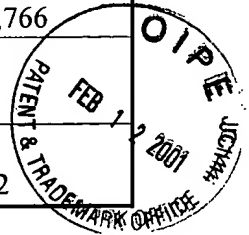
Date Considered:

10/16/01

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Part of #11

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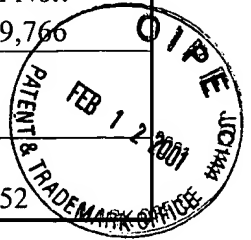
## U.S. Patent Documents

Examiner Initial		Patent No.	Date	Patentee	Class	Sub-Class	Filing Date
nlm	*	3,263,824	8-1966	Jones et al.			
		3,919,691	11-11-1975	Noll			
	*	3,923,166	12-1975	Fletcher et al.			
	*	4,046,262	9-1977	Vykukal et al.			
		4,216,467	8-5-1980	Colston			
		4,227,319	10-14-1980	Guy et al.			
	*	4,302,138	11-1981	Zarudiansky			
		4,414,537	11-8-1983	Grimes			
	*	4,414,984	11-1983	Zarudiansky			
		4,444,205	4-24-1984	Jackson			
	*	4,510,574	4-1985	Guittet et al.			
		4,557,275	12-10-1995	Dempsey, Jr.			
	*	4,575,297	3-1986	Richter			
	*	4,584,625	4-1986	Kellogg			
		4,604,016	8-5-1986	Joyce			
		4,654,648	3-31-1987	Herrington et al.			
	*	4,655,673	4-1987	Hawkes			
	*	4,661,032	4-1987	Arai			
		4,676,002	6-30-1987	Slocum			
		4,689,449	8-25-1987	Rosen			
		4,712,101	12-8-1987	Culver			
		4,767,923	8-30-1988	Yuasa			
		4,795,901	1-3-89	Kitazawa			
		4,800,721	1-31-1989	Cemenska et al.			
		4,811,608	3-14-1989	Hilton			
		4,823,634	4-25-1989	Culver			
		4,837,734	6-6-1989	Ichikawa et al.			
	*	4,853,874	8-1989	Iwamoto et al.			
		4,861,269	8-29-1989	Meenen, Jr.			
nlm		4,868,549	9-19-1989	Affinito et al.			

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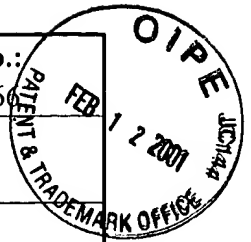
**U.S. Patent Documents**

Examiner Initial	Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
WUW	4,874,998	10-17-1989	Hollis, Jr.			
	4,879,556	11-7-1989	Duimel			
	4,896,554	1-30-1990	Culver			
	4,906,843	3-6-1990	Jones et al.			
	4,914,976	4-10-1990	Wyllie			
	4,935,728	6-19-1990	Kley			
	* 4,962,448	10-1990	DeMaio et al.			
	4,986,280	1-22-1991	Marcus et al.			
	* 4,988,981	1-1991	Zimmerman et al.			
	* 5,004,391	4-1991	Burdea			
	5,007,085	4-9-1991	Greanias et al.			
	5,044,956	9-3-91	Behensky et al.			
	* 5,047,952	9-10-1991	Kramer et al.			
	5,056,038	10-8-1991	Kuno et al.			
	5,086,785	2-11-1992	Gentile et al.			
	5,095,303	3-10-1992	Clark et al.			
	5,103,404	4-7-1992	McIntosh			
	5,107,080	4-21-1992	Rosen			
	5,142,931	9-1-1992	Menahem			
	5,143,505	9-1-1992	Burdea et al.			
	5,181,181	1-19-1993	Glynn			
	* 5,184,319	2-2-1993	Kramer			
	5,185,561	2-9-1993	Good et al.			
	5,186,629	2-16-1993	Rohen			
	5,193,963	3-16-1993	McAfee et al.			
	5,220,260	6-15-1993	Schuler			
	5,235,868	8-17-1993	Culver			
	5,280,265	1-18-1994	Kramer et al.			
	5,296,871	3-22-1994	Paley			
WUW	5,354,162	10-11-1994	Burdea et al.			

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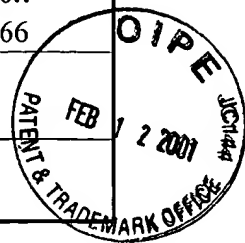
**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
WLL		5,389,865	2-14-1995	Jacobus et al.			
		5,414,337	5-9-1995	Schuler			
		5,435,729	7-25-1995	Hildreth et al.			
		5,445,166	8-29-1995	Taylor			
		5,589,828	12-31-1996	Armstrong			
WLL	*	5,631,861	5-1997	Kramer			

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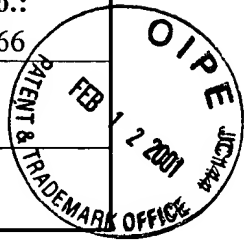
**Foreign Patent or Published Foreign Patent Application**

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub- class	Translation Yes No	
WJW	A	0 085 518	8-10-1983	Europe			x	
	B	0 265 011	4-27-1988	Europe			x	
	C	WO 92/00559	1-9-1992	PCT			x	
WJW	D	0 489 469	6-10-1992	Europe			x	

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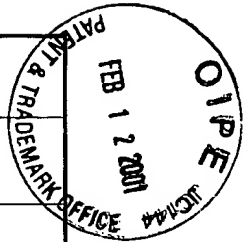
**Other Documents**

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
WLU	E	Gotow et al., "Perception of Mechanical Properties at the Man-Machine Interface" IEEE, pages 688-689, 1987.
	F	Wiker et al., "Development of Tactile Mice for Blind Access to Computers: Importance of Stimulation Locus, Object Size, and Vibrotactile Display Resolution" Proceedings of the Human Factors Society 35 <sup>th</sup> Annual Meeting, pages 708-712, 1991.
	G	Atkinson et al., "Computing with Feeling" Comput. & Graphics, vol 2, pages 97-103, 1977.
	H	Millman et al., "Design of a Four Degree-of-Freedom Force-Reflecting Manipulandum with a Specified Force/Torque Workspace" Proceedings of the 1991 IEEE International Conference on Robotics and Automation, pages 1488-1493, April 1991.
	I	Brooks et al., "Project GROPE- Haptics Displays for Scientific Visualization" Computer Graphics, vol 24, no. 4, pages 177-185, August 1990.
	J	Noll, "Man-Machine Tactile Communication" PhD Dissertation at Polytechnic Institute of Brooklyn, pages 1-89, 1971.
	K	Winey, III, et al., "Computer Simulated Visual and Tactile Feedback as an Aid to Manipulator and Vehicle Control" Masters Thesis at the Massachusetts Institute of Technology, pages 1-79, June 1981.
	L	Ouh-young et al., "Using a Manipulator for Force Display in Molecular Docket", IEEE, pages 1824-1829, 1988.
WLU	M	Fisher, "Telepresence master glove controller for dextrous robotic end-effectors" SPIE Vol. 726 Intelligent Robots and Computer Vision: Fifth in a Series (1986).

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Examiner Initial		No.	Author, Title, Date, Place (e.g. Journal) of Publication
WLM	*	N	Product disclosure providing a force-reflective controller, Sarcos Research, Utah (date unknown).
/	*	O	Hayati, "A Unified Teleoperated-Autonomous Dual-Arm Robotic System," IEEE Control Systems, vol. 11, No. 2, pages 3-8, Feb. 1991.
/	*	P	Iwata, "Artificial Reality with Force-feedback: Development of Desktop Virtual Space with Compact Master Manipulator" Computer Graphics, vol 24, no. 4, pages 165-170, August 1990.
WLM	*	Q	Kilpatrick, "The Use of Kinesthetic Supplement in an Interactive Graphics System" PhD Dissertation, The University of North Carolina at Chapel Hill, pages 1-175, 1976.

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